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Date of Birth: 1988

Gender: Female

Nationality: Kenyan

CAREER OBJECTIVE

To become an established immunologist with significant teaching and research capacity in the area of host-pathogen interactions and immunological interventions against infectious disease and non-communicable diseases, to alleviate pain and suffering and improve health.

EDUCATION

Doctor of Philosophy in Medical Immunology

Harbin Medical University-Harbin, China

Sep 2017-date

Research interest: Mechanism of penetration and action of 1G3, an anticancer autoantibody from SLE patients

Master of Science in Immunology

Jomo Kenyatta University of Agriculture and Technology- Juja, Kenya

2011-2015

Thesis Title: Effects of dexamethasone and hydrocortisone in the control of Leishmania major infection in Balb/c mice

The study demonstrated that glucocorticoid treatment of leishmania infected mice resulted in a reduction of pathological indices through the immunosuppressive activity of the steroid on 2 macrophage derived chemokines: MIP-1 α and MCP-1. This work resulted in a peer reviewed publication.

The study was conducted in state of the art laboratories of the Institute for Tropical Medicine and Infectious Diseases (ITROMID), a joint research platform between the University and the Kenya Medical Research Institute (KEMRI), funded by the Government of Japan.

This degree also involved taught coursework including 8 units in Immunology of parasitic and infectious diseases, Cell Biology & Genetics and Research Methods.

Bachelor of Science in Biology (Biomedical Option)

2007-2010

University of Eastern Africa, Baraton - Kapsabet, Kenya
(Second class honours, Upper Division-cum laude)

WORK EXPERIENCE

Tutorial Fellow/Assistant Lecturer

Jan 2017-Apr 2020

Kenyatta University, School of Medicine, Department of Pathology

Duties:

Teaching Medical Immunology Courses including;

1. Basics of Immunology
2. Immunoglobulins and complement
3. Applications of Immunology in human disease management and control

Tutorial Fellow/Assistant Lecturer

Apr 2020-Present

Kenyatta University, School of Medicine, Department of Medical Microbiology and Parasitology

Duties:

Teaching Medical Immunology courses for Schools of Medicine, Pharmacy and Nursing including;

1. Basics of Immunology
2. Immunoglobulins and complement
3. Applications of Immunology in human disease management and control

Part-time Graduate assistant

Jan 2014-May

2015

Jomo Kenyatta University of Agriculture and Technology

Department of Zoology

Duties:

Teaching introduction to HIV/AIDS

Assisting Department professors to administer and mark Continuous Assessment Tests/ main university exams

Intern

Oct 2010–Feb 2011

International livestock Research Institute (ILRI) Nairobi

Laboratory intern with a research group involved in the development of diagnostic tests for Contagious Bovine Pleuropneumonia using recombinant proteins for *Mycoplasma mycoides mycoides*

- Tissue culture
- Immunodiagnostic techniques (Immunoblotting and ELISA)
- Production of monoclonal antibodies (Immunisation, harvesting of cells, fusion and screening for hybridomas and cloning of cells)

Laboratory Assistant

April 2008 –

June 2010

Department of Biology, University of Eastern Africa, Baraton

- Assisted with molecular laboratory techniques including isolating DNA and gel electrophoresis.
- Taught laboratory sections for undergraduate introductory Basic Medical Microbiology, General Microbiology and Cell and Molecular Biology courses.
- Prepared different kinds of media for microbiology lab sessions.

TRAININGS AND CONFERENCES ATTENDED

- Attended and presented a paper at the eighth JKUAT scientific, technological and industrialization conference in AICAD, JKUAT, Nairobi, Kenya. (November 23-25, 2013) **Title: Effects of glucocorticoids on chemokine production: a bid to control leishmaniasis**
- Attended and presented a paper in the first international innovation and research conference of the Mt. Kenya University in Safari Park hotel, Nairobi, Kenya (August 28-30, 2013). **Title: Inhibition of *Leishmania* infection development using glucocorticoid drugs *in vitro***
- Attended and presented a paper in KEMRI (Kenya Medical Research Institute) KASH (KEMRI Annual Scientific and Health) Conference (February 6-8, 2013) Title: **Exploring the use of Glucocorticoid Drugs in Prevention of *Leishmania* Infection: An *in vitro* study**
- Attended the sixth JKUAT scientific, technological and industrialization conference (November 23-25, 2011).
- Training on tissue culture and monoclonal antibody production in ILRI (International Livestock Research Institute) October 2010 - February 2011
- Training on data analysis using STATA statistical software (24th -28th July, 2017)

PUBLICATIONS

1. **Rose M. Nyamao**, Zipporah O. Lagat, Khayeka W. Christopher, Benard M. Jumba, Rebeccah W. Waihenya, Robert Karanja and Bernard Osero Ong'ondo (2014). Efficacy of glucocorticoids in controlling *Leishmania major* infecting Balb/c mice. *Journal of Infectious Diseases and Immunity* 6(2): pp. 10-18.
2. Bernard N. Jumba, Christopher O. Anjili, Judith Makwali, Johnstone Ingonga, **Rose Nyamao**, Sylvia Marango, Joseph K. Choge and Christopher Khayeka-Wandabwa. (2015) Evaluation of leishmanicidal activity and cytotoxicity of *Ricinus communis* and *Azadirachta indica* extracts from western Kenya: in vitro and in vivo assays. *Biomed central research notes* 8: (650).
3. **Rose N.M.**, Wu, J., Yu, L., Xiao, X., & Zhang, F.-M. (2018). Roles of DDX5 in the tumorigenesis, proliferation, differentiation, metastasis and pathway regulation of human malignancies. *Biochimica et Biophysica Acta (BBA)-Reviews on cancer*
4. Kosgey JC, Jia L, Fang Y, Yang J, Lei Gao, Wang J, **Nyamao R**, Cheteu M, Tong D, Wekesa V, Vasilyeva N, Zhang FM (2019). Probiotics as antifungal agents: Experimental confirmation and future prospects. *J Microbiol Methods*, 162, 28-37.
5. Kosgey, J., Jia, L., **Nyamao, R.**, Zhao, Y., Xue, T., Yang, J., Fang, Y. and Zhang, F., 2020. RNase 1, 2, 5 & 8 role in innate immunity: Strain specific antimicrobial activity. *International Journal of Biological Macromolecules*, 160, pp.1042-1049.

COMPUTER SKILLS

Knowledge and experience of Microsoft Word, PowerPoint, Excel, Adobe Acrobat, SPSS and STATA

REFERENCES

Prof. Alloys S.S Orago
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